UNIVERSITY OF MICHIGAN
MAY 27 1953
MEDICAL LIBRARY

Sec. 34.66 P. L. & R.
U. S. POSTAGE
PAID
El Paso, Texas
Permit No. 989

Southwestern MEDICINE

OFFICIAL JOURNAL OF THE SOUTHWESTERN MEDICAL ASSOCIATION AND EL PASO COUNTY MEDICAL SOCIETY

July, 1952

Contents

Noted Heart Specialist To Speak At Southwestern Meeting ..... Page 241

The President's Column ..... Page 242
By James S. Walsh, M. D., Douglas, Arizona

Aphorisms – Truths and Concepts Concerning Hormonal Therapy ..... Page 243
By Andrew M. Babey, M. D., Las Cruces, N. M.

The Care of Crossed Eyes ..... Page 244
By W. E. Vandevere, M. D., El Paso

Cystic Malignant Melanoma of the Ciliary Body ..... Page 248
By Charles P. Elsberg, M. D., El Paso

Interpulmonary Circumscribed Lesions ..... Page 251
By Manley B. Cohen, M. D., El Paso

Proving ground

... in vivo

Lilly

Experimental pharmacology is the foundation of rational therapeutics. Through such experimentation, empiricism has been replaced by definite knowledge of how a given drug acts. The Division of Pharmacology of the Lilly Research Laboratories is equipped and staffed to study and evaluate new therapeutic agents.

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U. S. A.

THIS PRINTING: 2,500 COPIES

Now available

RIMIFON

the new 'Roche' antituberculous drug

The new antituberculous compound, Rimifon 'Roche', is now available.

Preliminary studies in pulmonary and extrapulmonary tuberculosis have been very encouraging. However, it will take some time until the therapeutic possibilities and limitations of Rimifon can be fully evaluated.

At present, Rimifon should be employed together with other therapeutic measures, such as bedrest, collapse therapy and surgery which may be indicated. As is true of all antibacterial drugs, Rimifon may occasionally give rise to bacterial resistance but its extent and clinical significance have not yet been determined.

For detailed information on the clinical use of Rimifon, write to the Professional Service Department of Hoffmann-La Roche Inc.

RIMIFON—T. M.—brand of isoniazid (isonicotinyl-hydrazine)

HOFFMANN-LA ROCHE INC.
Roche Park • Nutley 10 • New Jersey

NOTED HEART SPECIALIST TO SPEAK AT SOUTHWESTERN MEETING

Dr. Louis N. Katz, internationally prominent in the field of cardiology, will be one of the speakers at the annual meeting of the Southwestern Medical Association in Albuquerque, October 30 through November 1, Dr. Wesley O. Connor, Jr., Albuquerque, president-elect of the association, has announced.

Dr. Katz at present is Director of Cardiovascular Research and also Professorial Lecturer in Physiology at the University of Chicago. He is coauthor of a volume on "Experimental Atherosclerosis" published in 1951 by Charles C. Thomas. In addition to earlier volumes, he is the author of over 320 communications in national and international journals and collaborator in more than 200 other communications by colleagues and associates in the Cardiovascular Department at Michael Reese Hospital.

Dr. Louis N. Katz

Born in Pinsk, Poland, in 1897, Dr. Katz received his A. B., M. D., and M. A. in Medicine degrees from Western Reserve University. He was Interne and Assistant Resident in Medicine at the Cleveland City Hospital and then was successively Demonstrator of Medicine and Demonstrator of Physiology at Western Reserve University. In 1924-25 he was a Fellow of the National Research Council in the Department of Physiology at the University College of the University of London. He then returned to the United States to become first Senior Instructor in Physiology and then Assistant Professor of Physiology at the Western Reserve University. He was Consulting Cardiologist at St. Lukes Hospital in Cleveland and then Assistant Professor of Physiology and later Professorial Lecturer in Physiology at the University in Chicago. He has been Director of Cardiovascular Research at Michael Reese Hospital since 1930.

Dr. Katz is a past president of the Society for Experimental Biology and Medicine, the Chicago Society of Internal Medicine, the American Physiological Society, the American Heart Association, and the III Interamerican Cardiological Congress. He is permament Honorary President (for life) of the Interamerican Society of Cardiology. He is a past member of the Board of Directors of the American Society for the Study of Arteriosclerosis and a past member of the Medical Advisory Committee of the American Foundation for High Blood Pressure. He is Editor of the Section on Physiology of the Cardiovascular System in "Biological Abstracts." He is on the Editorial Board of the American Heart Journal, the Journal of Clinical Investigation, Acta Cardiologia, Archives Internationale Pharmacodynamie et Therapie, and the American Journal of Physiology. He is on the Advisory Board of the Heart Bulletin. He is Assistant Treasurer of the International Cardiological Society.

Among earlier books authored or coauthored by Dr. Katz are the following: "Elements of Electrocardiographic Interpretation" in 1932, 1944; "Electrocardiography" in 1941, 1946; and "Exercises in Electrocardiographic Interpretation," 1941, 1946.

The President's Column

By Dr. James S. Walsh,
Douglas, Arizona, President
Southwestern Medical Association

The power of the United States is recognized by the entire world, envied by most and challenged only by Soviet Russia. It is small wonder that most of the rest of the world is envious of a country with less than one-fifteenth of the world's population enjoying over one-half of the world's luxuries. Nevertheless the free world looks to our economic and productive might as their main bulwark against communist aggresion.

What has made America strong? Many of us have no clear idea. Some accept the theory that we are powerful only because we inherited a continent rich in natural resources. This belief fails to answer the question. Many other countries rich in natural resources have not approached our success. The fundamental secret of our rapid rise to a powerful nation has been the first one hundred and fifty years, during which a private enterprise system was allowed to utilize those natural resources unhampered by bureaucratic restrictions on energy and ambition.

STRONG PROOF

It is possible that the United States having demonstrated so strong a proof of the virtues of a free economy is not aware of/or is indifferent to the secret of its own greatness?

We have been confused and disillusioned by promises of an even better life through so-called "Social Progress." In reality we have been "sold down the river" and at this time are in grave danger of losing our secret of greatness. We have in fact, a labor government dominated by men of socialistic ideals. Perhaps it is time we junked our traditional political parties so that the vote hungry candidates can no longer hide behind the cloak of respected and honored party names, but must be selected or rejected on the basis of their convictions.

WORLD POWER

This position of world power in which we find ourselves is different from that of other powerful nations in the history of the world. The ancient Greeks, the Romans, Spain, on down to Great Britain achieved dominance through conquest, military or economic. Ours has been thrust upon us by process of elimination and by the failure of other nations to measure up to their acquired power. Our nation was founded on a wholly different concept. The Bill of Rights guaranteed to every one the right to the fruits of his own labor not to be taken away from him without due process of law.

The seeds of freedom planted by the founders of this nation have permitted us to grow into a world power without conquest of the weaker nations. Unless we reject this trend of the past 20 years toward totalitatian socialism, we will find ourselves internally impotent and the mantle of power that has been thrust upon us will be quickly snatched away.

DR. ROBERT B. HOMAN, JR. ATTENDS CONVENTION

Because he has been on vacation and also attending the annual meeting of the American Medical Association in Chicago as a member of the House of Delegates, Dr. Robert B. Homan, Jr., did not write his customary column for this edition of SOUTHWESTERN MEDICINE. He will be back in the August edition, revived, refreshed and with the latest news on medical and political developments from the convention.

APHORISMS
TRUTHS AND CONCEPTS
CONCERNING HORMONAL THERAPY

By Andrew M. Babey, M. D., Las Cruces, N. M.

1. "In general, it has been found satisfactory both at our clinic and in others to give three grams of additional potassium per day as a chloride if therapy (with ACTH) is to last more than two weeks." — S. Howard Armstrong, Postgraduate Medicine, July, '51, Page 1.

2. "Cortisone may be administered to desperately sick patients where ACTH withdrawal is forced by psychosis." — S. Howard Armstrong, loc cit, Page 2.

3. "Cushing's Syndrome is not an absolute indication to stop treatment; often slow abatement occurs on a mere reduction of dosage."—S. Howard Armstrong, loc cit, Page 2.

4. "A word about the diabetes that occurs in these patients (treated with ACTH) ; you may hear that it is insulin resistant; this is not so. If you find that your patient is beginning to run blood sugars of 300 or 400 mg. per cent or is passing a lot of urinary sugar each day, I would handle him the way you would handle an ordinary diabetic. You may find it takes a little more insulin than you would expect, but in almost all instances the diabetes will subside when the treatment is stopped and you will have plenty of time to taper off the insulin." — S. Howard Armstrong, loc cit, Page 3.

5. "In long-term patients whose inflammatory symptoms seem to be escaping from control by therapy, watch out for ACTH or cortisone-induced hypothyroidism . . . Symptomatic control can often be achieved once more *not* by increase of ACTH or cortisone dosage but by addition of thyroid to the regimen." — S. Howard Armstrong, loc cit. Page 3.

6. "I think it is perfectly legitimate to start a patient having a gouty attack on an initial dose of 50 mg. of ACTH and follow that up for two or three days at a rate of about 25 mg. every four hours. But start colchicine at the same time, because when you cut the ACTH . . . . your patient won't have a very serious exacerbation, whereas if you do not start colchicine at the same time your patient will get much worse gout than he had initially." — S. Howard Armstrong, loc cit, Page 4.

7. "Speaking of the liver, ACTH has a good deal of symptomatic value in the treatment of terminal carcinoma . . . . if you have a patient dying of terminal carcinoma with a great big liver and a lot of fever, pain and malaise your patient will feel better and his malaise and fever will be a great deal less on very small doses that is, 10 mg. three or four times a day. You may be able to give that patient an easier type of exitus . . . . You must not fool yourself that it is doing the cancer any good." — S. Howard Armstrong, loc cit, Page 4.

8. "ACTH will do for asthma what it will do for gout . . . . be sure the patient hasn't a chronic sore throat or sinusitis, because those patients tend to relapse following the withdrawal of ACTH." — S. Howard Armstrong, loc cit, Page 5.

EDITOR'S NOTE: — *Because of the enthusiastic and widespread response to the series of aphorisms collected by Dr. Babey and published in the last eight editions of SOUTHWESTERN MEDICINE, he has generously consented to continue the series through at least the next few editions. It is the hope of The Editors as well as of our readers that this series will develop into a permanent, monthly fixture in our journal. These aphorisms represent the most striking findings of a galaxy of experienced clinicians and offer means for swift and important review as well as outline for post-graduate study.*

ANTIBIOTICS—SYNERGISM

The Synergistic Action And Potential Application Of Antibiotic Combinations

Romansky, M. J., et al., M. Clin. North America 35:535, 1951

Development of bacterial resistance to penicillin and streptomycin and availability of newer antibiotics presents an additional problem in selection of appropriate therapy. Combined antibiotic treatment need not be employed routinely but concurrent administration of antibacterial agents exhibiting synergism is highly desirable in dealing with infections due to resistant bacterial strains.

Clinical Clippings, May, 1951.

THE CARE OF CROSSED EYES

By W. E. Vandevere, M. D., El Paso

DEFINITION

Crossed eyes, squint, strabismus and heterotropia have the same meaning. An eye may deviate from the other eye in any direction — in or out or up or down, or in a combination of two directions. The condition may be constant, intermittent, alternating or latent.

In times past, a cross-eyed child, like a left handed one, was considered to be under the special influence and guidance of the devil. This is not surprising when we think of the timidity, self-consciousness and inferiority complex such a blemish frequently produces.

There are two broad divisions of squint-nonparalytic and paralytic. The nonparalytic variety is known also as comitant, or concomitant squint, in which the amount of deviation remains the same in all directions of gaze. In the noncomitant or paralytic squint, the amount of deviation changes markedly when the eyes are turned in the direction of the field of action of the paralyzed muscle.

ETIOLOGY

Paralytic or noncomitant squint may be congenital or due to injury or disease. The nonparalytic or concomitant type is the one most often seen and is usually due to: (1) an anatomical defect in the development of the muscles of the eye, (2) a visual defect due to injury or disease, or, (3) refractive errors and need of glasses.

Up to six months of age the eyes may cross from time to time because the fusion sense, or ability to look at an object with both eyes at the same time has not been developed. This is normal and should cause no concern. After this age, however, should the eyes be seen to cross, the child should be taken to an eye physician for a careful examination.

An eye may turn in — esotropia — because of underaction of the abductor muscles or overaction of the adductor muscles. An eye may turn out — exotropia — because of an underaction or insufficiency of the adductor muscles or because of an overaction or excess action of the abductor muscles.

Any condition which renders the vision of one eye much worse than that of the other is likely to cause that eye to squint, otherwise the indistinct vision in the weak eye frequently causes diplopia or double vision and the eyes avoid this by crossing.

Squint frequently develops because of refractive errors. Hyperopes usually develop esotropia, and myopes exotropia. This is explained by the fact that if one is highly hyperopic or far sighted he must make an unusually strong effort of accommodation to see clearly. Since the effort of accommodation or focusing of the eye is linked with an equally strong nerve impulse of convergence, a convergence excess is often acquired and the eye turns in. The opposite holds true in myopia. No effort whatever is made to accommodate, because to do so would make one more myopic. Therefore, the convergence linked movement is never called into action, and as a result the eye frequently begins to turn out. We sometimes find a hyperope with exotropia, or a myope with esotropia, but this is because the normal tendency of the refractive errors are overcome by a stronger muscular action of divergence excess in the first place, or a convergence excess in the second place.

Esotropia may begin from the first to fourth year of life, while exotropia usually develops later in childhood when myopia usually begins.

FIGURE NO. 1 — *M. M. age 8, marked right esotropia. Refractive error + 2.00 o. u., and vision 20/20 o. u., in which a good result was obtained by resecting both external recti and recessing the right internal rectus.*

ANATOMY

The extrinsic eye muscles are six in number — the four straight recti, and the superior and inferior obliques. The recti muscles arise from the apex of the orbit around the optic foramen and run forward to be inserted into the sclera at slightly unequal distances from the cornea. The distance being 5.5 m.m. for the internal rectus, 6.5 m.m. for the inferior rectus, 6.9 m.m. for external rectus, and 7.7 m.m. for the superior rectus.

The superior oblique also arises from the margin of the optic foramen, and passes through the trochlea or pulley which lies a little behind the upper and inner margin of the orbit. From the trochlea the muscle becomes tendinous and bends back at an acute angle passing beneath the superior rectus muscle, spreading out like a fan to be inserted into the eyeball in the upper half and behind the equator.

The inferior oblique muscle arises from the lower margin of the orbit near its inner extremity, running upward and outward beneath the inferior rectus to the outer side of the eyeball where it is inserted in the horizontal meridian behind the equator.

The superior oblique muscle is supplied by the fourth cranial nerve, the external rectus by the sixth cranial nerve, and all of the other extrinsic as well as intrinsic muscles of the eye are supplied by the third or oculomotor nerve.

DIAGNOSIS

Concomitant or nonparalytic squint presents no great difficulty in diagnosis, because the deviation remains the same whatever direction the eyes are turned. The problem here is to determine the degree of deviation and whether it is constant or intermittent and how the condition should be dealt with.

FIGURE NO. 2 — *shows W. U., age 9, alternating esotropia. Refractive error + 2.00 with + 1.00 × 90 o. u., vision 20/20 o. u., excellent result by resecting of both external recti and recession of left internal rectus.*

The paralytic squints are more difficult to diagnose, because in each of the six cardinal directions of gaze there are two muscles primarily involved — one in each eye. These are known as yoke muscles and normally act together. If one of these muscles becomes paralyzed, it fails to perform its function while the yoke muscle of the other eye overdoes its work due to the excessive nerve stimulation sent to the paralyzed muscle in nature's effort to make it function.

By far the largest number of paralyses of the external eye muscles involve the sixth or abductor nerve supplying the external rectus muscle. This is probably due to the long course of the nerve from its emergence at the brain to its entrance into the muscle. This nerve is sometimes injured at birth, and is frequently involved in the acute infections, brain hemorrhages, luetic infections, and occasionally in mastoid infections involving the tip of the petrous portion of the temporal bone causing a pinching of the nerve as it passes through Dorello's canal.

Paralysis of the sixth cranial nerve prevents the eye involved from being turned to the temporal side beyond the mid-line, and turning of the eyes in the direction of the involved muscle causes diplopia, and the images become more widely separated the more the vision is directed to that side.

Paralysis of the elevators or depressors of an eye present a more difficult diagnostic problem. In hypertropia, or where one eye turns up more than the other, one of the obliques is usually involved, although there may be a paralysis of the superior or inferior rectus.

Tilting of the head to one side is marked in a superior oblique paralysis of the opposite side, and only slight in a superior rectus paralysis of the opposite side. If the head is forcibly tilted to the shoulder of the same side as the paralyzed muscle, this eye will make an upward movement if the superior oblique is paralyzed. If the superior rectus is paralyzed, the eye either will not move at all or will move slightly downward.

TREATMENT

The earlier the treatment of squint is begun the more likely it is to succeed. In the past and even today there are those who consider these blemishes to be the "work of God," and in no wise to be interfered with.

Then, too, parents are sometimes told to do nothing as the child will outgrow the condition. It is true that this statement is sometimes correct, but invariably the eye which crossed fails to develop normal vision and nothing can ever be done to restore normal vision to it. It is difficult to understand just what has happened when we see a cross-eyed person. Finances cannot be blamed in these days of free clinics and hospital care. Some understanding of the situation can be had when we know how prone people are to heed the advice of friends or neighbors on medical subjects rather than a competent physician; and we know that back yard fence gossip is considered more valuable than that emanating from the most famous medical authorities in the country. The mother is told by some well-wishing friend that she knew someone once, who had an operation for crossed-eyes and the child went blind in that eye. Perhaps then, the child is taken to an optometrist, who gives the child exercises for two or three years, of course, without results. These delaying tactics are sometimes aided and abetted by the family physician who advises to do nothing, as the eyes may straighten when the child is older. Then too, I am sorry to say, it may be that the child has been taken to an eye doctor, who advises against operation, generally because he does not have the ability or desire to operate, and for that reason does not believe in operations.

A careful refraction under complete atropine cycloplegia is the first step to be taken. An approximate correction can be determined by use of the retinoscope, and a full correction given the child of 18 months to two years of age. This is to be worn constantly. This alone is often sufficient for cure, provided the treatment is started early. Combined with the wearing of glasses, orthoptic exercises sometimes help, also, bandaging the good eye for increasing interval each day.

If these measures fail there is little chance for relief except through operation, which should not be delayed beyond the fifth year of life, and preferably before, because after a time the squinting eye becomes amblyopic, and vision is never made normal even though an operation might restore a normal appearance. Of course, the cosmetic result is what the family and patient, if he is older, most desire; and no patient of any age should be denied the happiness of having crossed eyes made straight, regardless of what vision might be present or obtained.

In operations for squints we have many factors to take into consideration before deciding what and how much to do. In general, we try to remedy the condition as much as possible by strengthening, rather than by weakening muscle actions. Tenotomies are seldom done except in some of the paralytic squints, because we do not wish to destroy all function of any muscle. Instead we do a recession of the muscle.

In esotropia due to divergence insufficiency an advancement or resection of both external recti is in order. If the condition is due to a convergence excess, than a recession of one or both of the internal recti should be done. If the esotropia is excessive it is often necessary to advance or resect both external recti and recess one of the internal recti.

In exotropia where the attachment of the internal rectus is nearer to the cornea, and the leverage is less for that reason, we generally have to advance both internal recti, and recess one or both of the external recti. We are far less likely to get an over correction of an exotropia than an esotropia. It should be understood that more than one operation might be necessary to obtain a cosmetic result and that it is easier to proceed with an undercorrection than an overcorrection. However, one should not be too alarmed about an overcorrection; because, if sufficient time is given for all tissue reaction to subside, one can easily locate a recessed muscle and advance it as far as desired.

We have found 4-0 ten day cromic catgut, double armed suture suitable for tendon work, although many use silk; and recent experiments prove rather conclusively that plain catgut would be satisfactory.

Both eyes are bandaged for three to five days. It is believed that attachments are suf-

FIGURE NO. 3 — *Mrs. E. R., age 45, left esotropia, vision 20/20 right eye, and fingers seen at one foot with left eye due to corneal scars. Good cosmetic result obtained by recession left internal rectus and resection of both external recti.*

ficiently firm by this time to allow what eye movements the patient might be inclined to make.

In the paralytic squints where we have a complete loss of function in one or more muscles, the problem is different, and while much can be done to help the situation, a perfect result is not often obtained.

The most common condition of external rectus paralysis is greatly benefited by transplanting strips of tendon from the superior and inferior recti into the external rectus together with a resection of the external rectus and a recession of the internal rectus of the affected eye. Sometimes strips from the nasal side of the superior and inferior recti are used with the idea that the adductive power of these muscles are thereby restricted.

In vertical deviations due to paralysis of an oblique or superior or inferior rectus muscle, excellent results are often obtained by recession of an associate muscle of the opposite eye. It is the overaction of this associate or yoke muscle which causes an excessive movement of the sound eye when an effort is made to turn the affected eye in the direction of action of the paralyzed muscle. This produces the diplopia, head tilting, vertigo, false projection and deviation of the eye. The proper procedure is a recession of an inferior rectus with a paralysis of a superior oblique of the contralateral eye, or a recession of a superior rectus with a paralysis of the inferior oblique of the opposite eye. With a paralysis of an inferior rectus we would consider a recession of the superior oblique of the other eye. In a congenital or traumatic paralysis of a superior rectus muscle, excellent results are obtained by doing a recession of the inferior oblique of the opposite eye. Quite often, an advancement or resection of a weak muscle is the best procedure, and each case must be treated on its own merits.

Illustrating some of the more common conditions discussed in this paper are the following:

FIGURE NO. 4 — *J. M., age 25, right exotropia, vision, right eye, fingers 10 feet, left eye 20/100. Refractive error, none, right, and —2.00 with —.50 × 180, left, which brought vision to 20/50. Operation — right external rectus recessed, and right internal rectus advanced. Good cosmetic result.*

REFERENCES

1. Pascal, J. L. — Charting Diplopia and Muscle Actions. Amer. Jour. Ophth., 1946 - Aug., V. 29 - P. 1001.
2. Adler, F. H. — Differential Diagnosis Paralysis. Superior Rectus and Superior Oblique Muscles. Archives Ophthal., 1946 - Dec., V. 36 - P. 661.
3. Peter, L. C. — Textbook-Extra Ocular Muscles.
4. Wiener, Meyer & Alvis, A. Y. — Surgery of the Eye.
5. Spoeth, E. B. — Principles and Practice of Ophthalmology Surgery.
6. Fuchs, H. E. — Duane edition — Textbook of Ophthalmology.
7. Berens, Conrad — Textbook of Ophthalmology.
8. Duke-Elder, W. S. — Textbook of Ophthalmology.
9. White, James W. — Am. J. Ophth., 26:586, 1943.
10. Davis, W. T. — Arch. Ophth., C. 32 - P. 373 - Nov., '44.

PEDIATRICS

Use Of Methyl Testosterone In Premature Infants

Castles, C. G., Jr., & Waring, J. I., J. South Carolina M. A. 57:97, 1951

Various opinions have been expressed concerning the value of testosterone in management of premature infants. The authors administered 5 mg. methyl testosterone* daily to 20 premature babies, 14 of whom gained more weight over the same length of time than controls.

**Oreton-M, supplied by the Schering Corp.*

S. C. Med. College

Clinical Clippings, May, 1951.

STREPTOMYCIN— DIHYDROSTREPTOMYCIN

Neurotoxicity Of Dihydrostreptomycin Effects Of Longer-Term Therapy

O'Connor, J. B., et al., Am., Rev. Tuberc, 63:312, 1951

This study involved 55 patients treated with streptomycin or dihydrostreptomycin and PAS for three to six months. Significant loss of hearing occurred in many patients who received dihydrostreptomycin. "Hence, with certain exceptions, streptomycin is now preferred to dihydrostreptomycin, especially in patients for whom prolonged courses of combined chemotherapy are contemplated."

Clinical Clippings, May, 1951.

CYSTIC MALIGNANT MELANOMA OF THE CILIARY BODY

By Charles P. Elsberg, M. D., El Paso

Examination of the literature reveals the rarity of primary malignant melanoma of the ciliary body. It has been shown that the relative frequency of malignant melanoma in the choroid, ciliary body, and iris is about proportional to the amount of uveal tissue contained — about 85 per cent occur in the choroid, nine per cent in the ciliary body and six per cent in the iris. Peculiarly, the report of specific cases presented in the literature appears in an inverse ratio to their actual frequency — possibly this is owing to the fact that the tumor appears so spectacularly in the iris, much less so in the choroid and frequently is not diagnosed till late in the ciliary body.

Mortality in ophthalmology is, for the most part, dependent on the incidence of malignant tumor, especially malignant melanoma. Spaeth, in a recent article discussing ocular tumors, states "at the present time the only certain conclusion drawn from this analysis (of cases presented) is that the patients with sarcoma die early in life, and early in the course of the disease, and that adenocarcinoma is the most malignant of all the epithelial cell tumors of the eye".

Once metastasis has actually begun intraocular malignant melanomas are usually beyond the control of surgery. Enucleation of the affected eye often does not prevent the individual from eventually dying of this disease. In some cases, after local recurrences, exenteration is performed; this is more palliative than curative. X-ray, and radium therapy have been tried but no authentic cures of malignant melanoma of the eye have been found. Deneke, in 1936, showed that the mortality of malignant melanoma of the ciliary body is higher than that of the choroid or iris. Other reports corroborate this. This is due to the fact that tumors that reach the angle are particularly dangerous to life because of their tendency to invade Schlemm's canal — as was shown by Samuels. This fact together with late recognition is the cause of higher mortality of malignant melanoma of the ciliary body.

Sympathetic ophthalmia has been reported as a complication in a few cases. An intraocular operation, such as iridectomy for relief of Glaucoma is a likely factor. In one of Samuels' cases there was evidence of an old injury at the limbus in addition to the tumors. Terry and Jones reported a case of sympathetic ophthalmia with melanosarcoma that had perforated the globe. A few rare cases were reported by Fuchs and by Samuels in which sympathetic ophthalmia apparently developed in a globe not operated upon and not perforated.

The diagnosis of tumor of the ciliary body is often difficult, particularly in the differentiation between a benign and a malignant growth. It may be impossible at first to differentiate between a benign and malignant tumor. The benign lesion characteristically attains a certain size and remains so. Too, vascularization is uncommon in the innocent tumor. Beginning malignancy manifests itself clinically by an increase in size, varying discolorations in the same growth, an increased blood supply, changes in the pupil and development of abnormal tension.

On account of the numerous variations, errors in diagnosis are common. The typical course has been described by Fuchs in four classical stages. In the first the growth is localized in the eye and retinal detachment occurs. In the second, congestive glaucoma develops. The third, is marked by perforation of the globe and orbital extension. The fourth corresponds to metastases, especially to the liver. Glaucoma may be the first sign.

Necrosis of the tumor occurs and confuses the clinical picture. Samuels examined 106 cases of melanosarcoma, of which 31 were necrotic. Of the 31 cases with necrosis, an erroneous diagnosis was made in 20, mainly of glaucoma. Samuels called attention to iridocyclitis with a chocolate colored exudate in the anterior chamber, and the additional appearance of scleritis as signs of necrosis.

Early in the development, melanosarcoma of the ciliary body gives no symptoms and cannot be seen. Symptoms are manifest later than in tumor of the choroid. Early symptoms are change of refraction and loss of accommodation. This is easily overlooked. Subluxation of the lens or an opacity of the lens may be an early sign. Later, the iris becomes displaced; it protrudes into the anterior chamber, and the pupil becomes distorted. As the growth progresses the tumor may be visible at the angle and appears as a dark crescent at the root of the iris, simulating iridodialysis. Transillumination, however, is usually positive. The superficial blood vessels over the tumor become engorged and are

readily seen. This vascular engorgement has a diagnostic significance.

Terry and Johns in their series of 94 cases from Massachusetts Eye and Ear Infirmary reported that in 42 cases an erroneous diagnosis of glaucoma, retinal detachment, cataract, uveitis, and opaque cornea were made.

Retinal detachment occurs later in melanosarcoma of the ciliary body than in those of the choroid, which accounts for delay of subjective scotoma.

In melanosarcoma of the ciliary body, glaucoma occurs only occasionally. Terry and Johns in 1935 found that 28 per cent of their cases of ciliary body tumors were associated with glaucoma, while 47 per cent of the choroidal cases presented this association. Dunnington in 1938 reported a series in which 12.5 per cent of cases with ciliary body tumors presented glaucoma, while in 29.8 per cent of those with choroidal growths glaucoma occurred.

Cysts occurring in malignant melanomas of the uveal tract are chiefly of pathologic interest, but may, in themselves, present a clinical picture with a complicated diagnostic problem.

When cysts occur in ciliary body melanomas which extend behind the lens and in choroidal or iris melanomas which can be readily observed, there is no additional diagnostic problem. However, malignant melanomas, projecting into the posterior chamber from the posterior surface of the iris, or from the ciliary body, may be difficult to differentiate from simple cysts. This diagnostic difficulty may be enhanced when malignant melanomas in this position become cystic. At least eight benign posterior-chamber cysts have been reported in the literature in which the eyes have been enucleated with the diagnosis of malignant tumor.

DIFFERENTIAL DIAGNOSIS

In the differential diagnosis, traumatic implantation cysts and retention or inflammatory cysts may be excluded if there is a negative history and no evidence of uveal inflammation. Development of spontaneous cysts of the iris stroma and pigmentary epithelium, particularly the latter, may be confused with malignant melanomas of the posterior chamber, especially since they may simulate a malignant melanoma closely, and occur in the older age group. Also the inflammatory granulomas, or granuloma about an embedded foreign body, and syphilis are to be considered. Sometimes an iridocyclitis may obscure the picture. When the secondary glaucoma manifests itself, it is difficult to be sure that this condition is not primary.

Duke-Elder lists the following diagnostic features of a cyst in the posterior chamber; multiplicity, tremulousness, mobility, presence of a notched margin, and, above all, translucency. However, the test of translucency by transillumination may be deceptive, since a cyst may have thick pigmented walls and so appear solid. A tumor may undergo cystic changes with walls so thin the mass appears translucent. Thus, while translucency may differentiate a cystic tumor from a solid tumor, it cannot differentiate between a benign cyst and a cystic malignant tumor.

As Reese points out, "a cyst of the ciliary body may extend along the posterior surface of the iris and is then most likely to simulate a melanoma because the cyst wall, composed as it is of pigmented epithelium, interferes with the transillumination of light and gives the lesion an especially dark color which may be noted in the pupillary area." However, usually cysts are smooth on the surface and because of the clear fluid content and the lack of pigment in the epithelium composing the cyst wall facing the posterior chamber, transilluminated light may have a refractile quality which accentuates the cyst. This is in direct contrast to what occurs in the case of a melanoma.

Unfortunately, the practical value of transillumination is not equal to its theoretical value. Since the degree to which light passes through the ocular coats and media depends upon the absorption of the light by pigment, no differentiation can be made between pigmented tumors and hemorrhages. A large hemorrhage will prevent light from passing through and cases of hemorrhage simulating tumors have appeared in the literature.

There has been some experimental work measuring the transmission of light through layers of fluid containing blood in various forms. Laked blood transmits rays of light fairly well compared to a suspension of whole corpuscles. The corpuscles themselves have the power of breaking up the light by diffraction and preventing its passage through a layer of fluid.

It must be remembered that only pigmented tumors interfere with transillumination and that pigmentation does not necessarily accompany malignant growths, and therefore retinoblastomas and leukosarcomas generally transilluminate perfectly. It should also be noted that certain benign lesions, such as tumors, old inflammatory masses, and, particularly, old blood collections may be light

obstructing. Therefore, although much emphasis has been placed on the diagnostic value of transillumination, to much reliance must not be placed on transillumination in deciding the presence of an intra-ocular growth.

REPORT OF A CASE

History: H. G. a 45-year old white man, came to my office on Nov. 6, 1950, desiring a pair of glasses for close work. There was no history of any antecedent trauma or inflammation.

Physical Findings: Other than the pathologic findings in the right eye, physical examination disclosed nothing of significance. The visual acuity was 20/20 in both eyes. The pupils reacted to light and near vision and were equal and regular. The right eye showed a rounded, slightly roughened mass in the upper nasal sector of the ciliary body. There was a small, fine blood vessel on the surface of the mass. The growth projected into the vitreous behind the lens without indenting the lens. The mass appeared to arise from the ciliary body and possibly from the anterior portion of the choroid. It appeared dull on the surface with some pigmentation. On transillumination, it transmitted and diffused light better than the rest of the fundus. The pupil reacted normally on dilitation; there was no hemorrhage in the media and no alteration of intra-ocular tension. There was no evidence of inflammation in the eye. The visual fields showed a 20 degree contraction in the lower temporal quadrant of the right eye.

It was believed that this was a neoplastic cystic tumor of the ciliary body and the patient was advised that enucleation of the eye was in order. At this time, patient decided to seek consultation at a larger eye center. This was done, where a diagnosis of a simple cyst was made—mainly, it seems, because the mass transilluminated so well. He was advised to have his eyes checked every six to eight weeks since they were not absolutely certain of the diagnosis. He returned to my office for periodic examinations until October 5, 1951 when there was noted an increase of neovascularization on the growth, an engorgement of the episcleral veins, and a diminution of tension to 13 mm on the McLean Tonometer. Patient was advised again that enucleation should be done without further delay and he decided to return to the Medical Center he had previously visited. There, after a preliminary attempt to aspirate the cyst, the eye finally was enucleated. The pathologic report was malignant melanoma, spindle type grade A, of the ciliary body and choroid.

Gross Examination: Measurements: transverse 23.4 mm.; vertical 24.1 mm.; anteroposterior 24.3 mm. Cornea 12.1 x 11.6 mm. The cornea is clear, the anterior chamber of normal depth; the pupil is large and round. There is a partially healed scleral puncture 7 mm. from the limbus just above the medial rectus muscle, another 11.3 mm. from the limbus along the lower border of the medial rectus muscle; another 8.9 mm. below the previous one and an open scleral wound beneath the belly of the lateral rectus muscle 11.7 mm. from the limbus. A firm blood stained mass is adherent to the sclera between the insertion of the inferior oblique muscle and optic nerve. The eye was sectioned slightly off the transverse meridian. The vitreous is clear and viscid. In the choroid from 1 to 4:30 o'clock is a large almond-shaped tumor 11 mm. in thickness extending from the pars plana to just back of the equator. It has pushed the retina forward behind the nasal 1/3 of the lens. The mass is a yellowish-white color centrally and dark brown to blackish peripherally. The retina behind the tumor is detached and wrinkled, with dark brown material beneath it. The material beneath the detached retina is smooth, is definitely part of the choroid, thick and firm. An eosinophilic exudate also lies under the lower half of the retina. The optic disc is not seen.

Microscopic Examination: The cornea and iris appear in good condition. Nasally in the anterior choroid and ciliary body is a globular tumor 1 cm. in diameter, made up of sheets of spindle cells with fairly small nuclei and inconspicuous nucleoli. There are several spaces filled with serous fluid and some hemorrhage in the tumor. Posteriorly there is subretinal hemorrhage.

Discussion: Tumor of the ciliary body may be difficult to diagnose or differentiate from the benign growth. But even benign intra-ocular tumors may have a deleterious effect on the eye. Especially when situated in the ciliary body even benign tumors may cause retinal detachment or secondary glaucoma and the eye will be lost in most cases. In malignant melanoma the prognosis is uncertain at best. There appears to be no time limit of safety. Even enucleation at an early stage does not proclude metastases, and, after extraocular extension, fatalities rapidly increase. An enucleation of the eye will, therefore, be the method of choice in treating these tumors or other suspicious tumors. Exenter-

(Continued on Page 255)

INTERPULMONARY CIRCUMSCRIBED LESIONS

By Manley B. Cohen, M. D., El Paso, Texas

During the last several years, it has become increasingly evident that exploratory thoracotomy is a safe procedure. The use of this procedure to determine the exact nature of intrathoracic lesions that otherwise cannot be diagnosed, correspondingly has become more widespread.

The most commonly undiagnosed lesion seen on routine roentgenographic examination of the chest is the so-called "coin-lesion". This term is used to describe solitary circumscribed areas of opacity seen on posteroanterior chest films. Actually, their character may be extremely variable in location, size, shape, density, and degree of sharpness of the borders. The importance of the "coin lesion" rests in the fact that a large percentage are malignant.

Budgen[1] has pointed out, that in asymptomatic and circumscribed lesions of the chest, more than one half of the cases ultimately are shown to be malignant. Bouchot[2] reported 56 suspect cases. Of these, 16 were proven neoplasm and eight were tuberculous. Overholt[3] explored 145 patients with lesions discovered on routine survey. Neoplasm was found in 51 and malignant neoplasm in 35. Pulmonary tuberculosis was present in 52.

The more common pathologic entities that may appear as circumscribed lesions are: (1) Bronchiogenic carcinoma. (2) Pulmonary tuberculosis, either as inspissated cavities or tuberculomas. (3) Fungus disease, of which coccidiodomycosis is the most common. (4) Bronchial adenoma. (5) Solitary metastases to the lung. (6) Sarcoma. (7) Lymphoblastomas. (8) Benign tumors such as fibroma, lipoma, myoma, angioma and chondroma, hamartoma. Neoplasms within the thoracic cage, but not involving the pulmonary parenchyma per se, will not be considered.

BRONCHIOGENIC CARCINOMA

Ochsner and DeBakey[4] have pointed out that approximately one third of the cases referred to the surgeon will be judged inoperable on clinical examination. One third of the cases will be proven inoperable at exploration. Thus only one of every three patients will have resection performed. Of the resected group, one may expect that one of every five patients will survive five years. Since, at the present time, surgery remains the only satisfactory treatment, it is essential that the patient be operated at the earliest possible moment. The most opportune time is during that period when only a suspicion is entertained. In this respect, it is important to realize that carcinoma cannot be ruled out simply on the basis that the radiologic appearance of the lesion remains with little change over a prolonged period of time. Extension of the disease process may occur at any time.

CASE ONE

J. P., a 57-year-old white male entered the hospital Oct. 6, 1951 with a chief complaint of hemoptysis, cough, weakness and dyspnea since July 1950. A diagnosis of pulmonary tuberculosis had been made in 1926 but was called "arrested". The patient had been well until his present illness. A chest film, July 1950, revealed a circumscribed lesion of the left lower lobe. (Fig. 1). The patient's sputum, however, was positive for

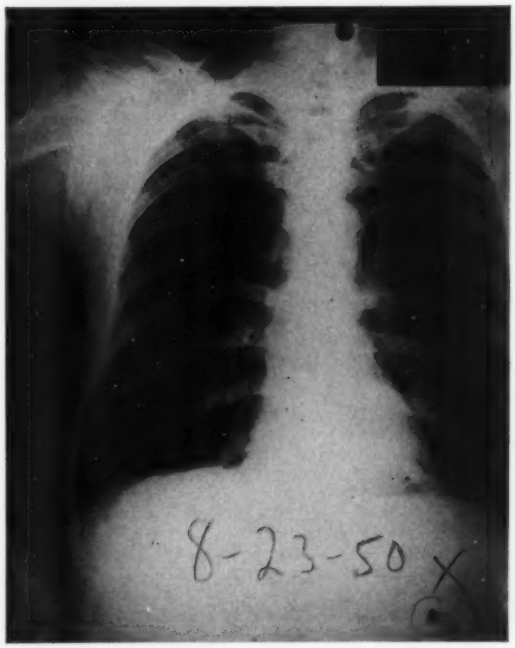

Fig. 1. Case 1. Arrow indicates circumscribed lesion in the lateral lower left lung field.

tubercle bacilli. He was treated with streptomycin, 1 gm. daily, for 88 days. Bronchoscopy, Sept. 4, 1951 revealed a cauliflower-like tumor projecting into the bronchial lumen at the carina. Biopsy revealed, squamous cell carcinoma grade II.

COMMENT: Apparently, the presence of pulmonary tuberculosis had obscured the true etiology of the mass present in the left lower lobe. Concomitant pulmonary tuberculosis and carcinoma is not uncommon, and should be suspected in the older age group. Fig. 1. demonstrates the appearance of the left lower lobe lesion when first seen. In Fig. 2., little change in the left lower lobe is seen. However, a right upper lobe atelectasis is evident in the second film. There was no evidence of any change on periodic films for more than one year after the patient was first seen. Surgical therapy may well have been done earlier in this patient's course. With the appearance of contralateral extension of the disease process, together with the bronchoscopic findings, no operation was possible.

PULMONARY TUBERCULOSIS

The decision of whether or not to excise the inspissated cavity or tuberculoma is often a difficult one. However, it is generally considered that these lesions, particularly the inspissated cavities, potentially are dangerous in a large percentage of patients. Early excisional surgery is indicated where the diagnosis is uncertain. Where there is a proven diagnosis of pulmonary tuberculosis with a cavity that has been shown to have become inspissated, the problem is somewhat more difficult. Often, these patients have a negative sputum. However, in a substantial percentage of these patients, the cavity will again break down and spread will occur. From a roentgenographic examination alone, the tuberculoma cannot be differentiated from the inspissated cavity.

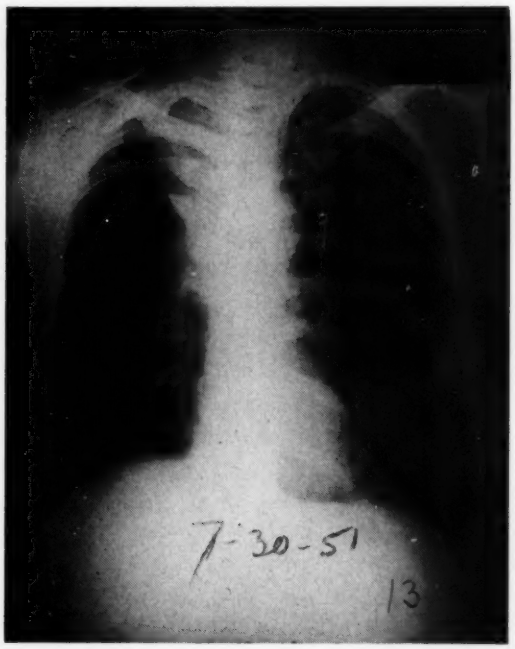

Fig. 2. Case 1. Arrow indicates circumscribed lesion in the lateral lower left lung field. Note the atelectasis involving the right upper lobe.

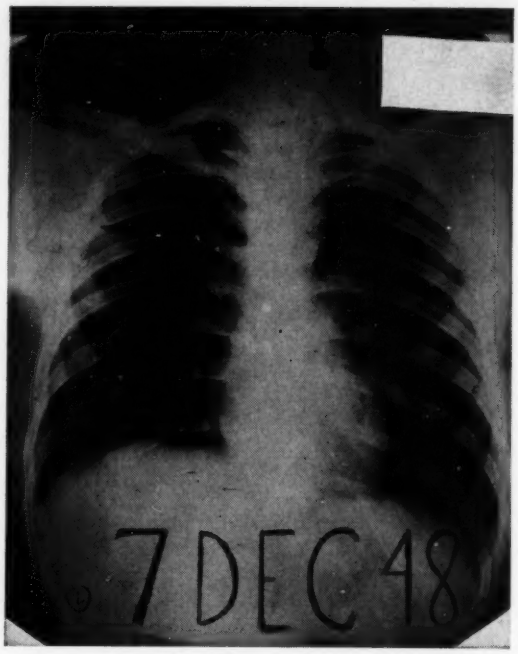

Fig. 3. Case 2. Note small circumscribed lesion overlying the right second anterior rib.

CASE TWO

G. G., a 27-year-old Latin-American male developed a cervical lymphadenitis in 1944. A biopsy of cervical nodes was reported to show tuberculosis. In 1948, a routine employment chest film showed a lesion of the right upper lobe. At this time, multiple sputum studies and gastric cultures were negative, for tubercle bacilli. PPD, first strength was positive. A right phrenic crush was performed, Oct. 12, 1948. The patient was given a diagnosis of pulmonary tuberculosis, minimal, arrested, August 1949, although a definite circumscribed lesion re-

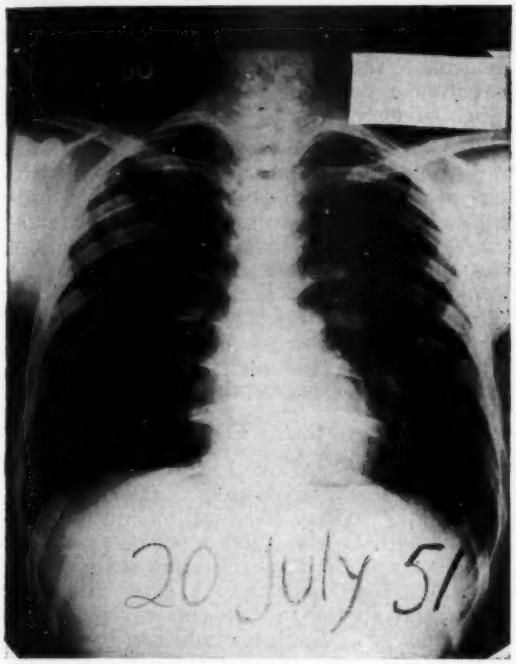

Fig. 4. Case 2. Note the very markedly enlarged circumscribed lesion indicated by the arrows. No apparent excavation is present.

mained present throughout this period of hospitalization, (Fig. 3). The patient was rehospitalized, Mar. 28, 1950, with increased disease of the right upper lobe, (Fig. 4). A positive sputum was obtained. The patient received streptomycin, one gm. daily, and para-aminosalicylic acid, 12 gms. daily, 42 days with no improvement. Bronchoscopy was performed Sept. 5, 1950. Findings were within normal limits. A right upper lobe lobectomy with concomitant thoracoplasty was performed Sept. 25, 1950. During the immediate preoperative and postoperative period the patient again received streptomycin and para-aminosalicylic acid. Sputum has remained negative since surgery. Pathologic examination revealed a four cm. inspissated cavity and small tuberculous foci scattered throughout the remaining upper lobe.

CASE THREE

W. B. R., a 28-year-old white male was first diagnosed pulmonary tuberculosis, March 1949. The patient was admitted to the hospital, June 14, 1950, with a positive sputum. His first chest film, (Fig. 5), revealed two circumscribed lesions in the left apex, one measuring 4 cm., the other 1.5 cm. In September 1950, the large apical lesion revealed itself as a cavity with a fluid level, (Fig. 6). Bronchoscopy was performed Oct. 21, 1950. The findings were within normal limits. A left upper lobe lobectomy and concomitant thoracoplasty was performed Oct. 9, 1950. The patient received streptomycin, one gm. daily, and para-aminosalicylic acid, 12 gms. daily, during his pre- and postoperative period. He has remained negative since surgery. Pathologic examination revealed a four cm. tuberculous cavity, two small adjacent caseous foci and two subpleural caseous foci measuring 1.5 cm. each.

COMMENT: Both cases represent changes in the appearance and increase in the extent of the disease process where inspissated cavitary disease had existed. In the first case, extension occurred two years after first being noted. Had exploration and excision been performed in Case Two before extension, it is likely that much of the upper lobe may have been salvaged. Both cases represent dangers that may be encountered with a policy of waiting in the face of inspissated cavities, even in those with a negative sputum.

COCCIDIODOMYCOSIS

Pulmonary disease due to C. Immitis, in every respect, may simulate tuberculosis. The

Fig. 5. Case 3. Note solid large circumscribed lesion in the left apex. Just lateral to it is another smaller lesion, somewhat less dense.

surgical indications for this disease do not properly fall into the scope of this paper. However, it is well to point out that even with negative sputum, negative complement fixation and negative precipitin test, as well as negative skin tests, coccidiodomycosis may exist. It is not uncommon to find this disease among the group of "coin lesions". Furthermore, patients are not alone confined to those having lived in the well known endemic areas. Where no diagnosis can be established, they fall into the group that must be suspected as carcinoma and perhaps tuberculosis. In such circumstances we must resort to exploration.

CASE FOUR

R. A. K., a 30-year-old white male entered the hospital Sept. 20., 1950. A circumscribed lesion of the left lower lobe, had been found on a routine chest film. PPD, second strength, was one plus; coccidioidin, 1:100 was one plus. Multiple sputum studies on smear and culture including gastric cultures for tubercle bacilli, were negative for A F B and fungi. Bronchoscopy was performed Oct. 2, 1950. Findings were within normal limits and washings were not remarkable bacteriologically. Resection of the superior division of the left lower lobe was performed Oct. 12, 1950. Smears and cultures taken immediately on the fresh surgical specimen revealed C. Immitis. The pathologic examination revealed a granulomatous lesion consistant with coccidiodomycosis. The patient has been well since surgery.

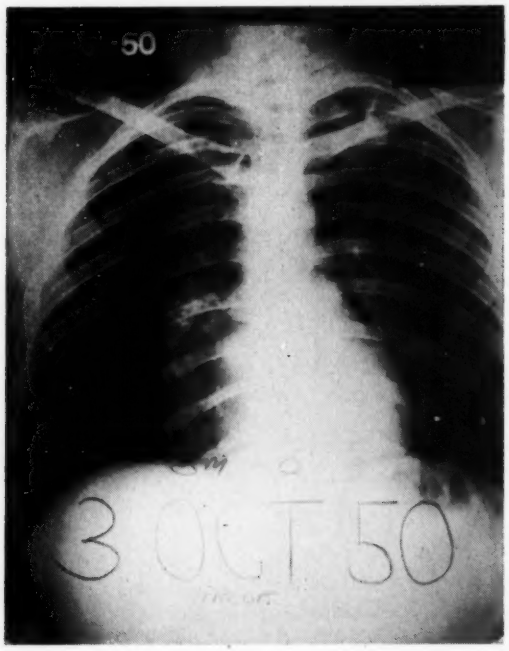

Fig. 6. Case 3. The large circumscribed lesion seen in Fig. 5. has now excavated and a fluid level is easily noted.

COMMENT: The diagnosis of coccidiodomycosis can invariably be established regardless of negative clinical and laboratory findings. Smears and cultures are immediately made on the fresh surgical specimen. Many granulomatous lesions of the lung, where the etiologic agent has been unknown, will be diagnosed accurately if this procedure is followed at the time of exploration. In this case, surgery was undertaken because no diagnosis had been established.

CASE FIVE

J. A., a 23-year-old Latin-American, entered the hospital March 5, 1951. While working at another hospital, on routine skin test with PPD, May 1950, a positive reaction was obtained. Prior to this time, several skin tests had been negative. A chest film was made and showed a two cm. cavity of the left upper lobe. Sputum studies on smear and culture, as well as gastric cultures, were negative for tubercle bacilli and fungi. Skin tests and serologic studies for fungi were negative. Because of the positive skin test with PPD, the patient was treated for tuberculosis. The patient received streptomycin and para-aminosalicylic acid, Nov. 1950 to Mar. 1951. No definite diagnosis had been established on admission. A new chest film June, 1951, revealed a solid, circumscribed two cm .lesion in the left upper lobe. Sputum studies and skin tests for tubercle bacilli and fungi were unchanged. On bronchoscopy, findings were within normal limits, and washings were not remarkable. A wedge resection of the left upper lobe lesion was performed July 2, 1951. The specimen contained a one cm. cavity filled with thick, light yellow pus. Immediate smear and culture from the fresh surgical specimen revealed C. Immitis. The patient has been well since surgery.

COMMENT: This case is important from several points of view. The patient had been treated for a prolonged period of time for tuberculosis on the basis of a changing skin test, but without bacteriologic proof. The diagnosis, which could not be made by the usual clinical and laboratory methods, was established at the operating table. Not the least important factor was the patient himself. He had become a severe economic problem. One year and a half had been spent in semi-invalidism. He is now completely reestablished in society and is gainfully employed.

DISCUSSION

The importance of early exploration for circumscribed lesions of the lung is well born out by the cases presented. A policy of waiting too often permits too great a delay. This is particularly true when dealing with neoplasms. It is much too easy to accept the point of view that no change in the radiologic appearance of a tumor proves the absence of malignancy. Unfortunately, malignant tumors can remain apparently unchanged a much greater period of time than is generally appreciated. It should also be pointed out that solitary metastases to the lung can be successfully excised if the primary focus has been well controlled. In many cases, long term survival has resulted.

In dealing with infections due to tuberculosis, coccidiodomycosis and other fungus diseases, it is important to rule out malignancy since up to 50 per cent of circumscribed lesions found on routine chest survey are malignant. Where the diagnosis is uncertain, early exploration will provide not only the diagnosis, but will offer the greatest opportunity for the arrest of the disease process, particularly if malignancy is encountered. Such a policy also will be extremely valuable socially, mentally and economically to the occasional patient that is mitakenly treated for tuberculosis over extended periods.

The benign tumors that may be present must be considered in the same light, for not only can the severe, debilitating and frequently fatal complications be avoided, but permanent cure can be offered to the patient.

SUMMARY

1. Various types of pulmonary circumscribed lesions have been discussed.
2. The importance of early exploration in the case of the undiagnosed lesion has been stressed.
3. The important economic factors involved have been emphasized.
4. Illustrative case histories and chest films have been presented.

REFERENCES

1. W. F. Budgen: Asymptomatic and Circumscribed Lesions of the Chest. Am. Rev. Tuberc., 62:512, Nov. 1950.
2. K. R. Bouchot: Mass Surveys as Case Finding Techniques for Pulmonary Neoplasms. Am. Rev. Tuberc., 62:501, Nov. 1950.
3. R. H. Overholt: Cancer Detected in Surveys. Am. Rev. Tuberc., 62:491, Nov. 1950.
4. A. Ochsner, M. E. DeBakey and L. Dixon: Primary Pulmonary Malignancy Treated by Resection. Am. Surg., 125:522, May 1947.

PARA-AMINOBENZOIC ACID

Myocardial, Hepatic And Renal Damage Resulting From Para-Aminobenzoic Acid Therapy

Cruicksnank, A. H. & Mitchell, G. W., Jr., Bull. Johns Hopkins Hosp. 88:211, 1951

Use of para-aminobenzoic acid in high dosage is not without danger. Three patients who had received appreciable amounts of PABA came to autopsy. Marked to extreme deposits of fat were observed in the liver, kidneys and myocardium.

Clinical Clippings, May, 1951.

DENTAL CARIES

Present Status Of Caries Control

Nassler, M., Gen. Pract. 3:33, 1951

There is no evidence that caries can be prevented by use of mouth washes and dentifrices containing fluorides. Fluorides added to milk are also without value, probably because an insoluble calcium fluoride is formed preventing deposition of ionic fluorine in or on the enamel.

Clinical Clippings, May, 1951.

GASTROINTESTINAL DISEASE

An Experimental And Preliminary Study Of The Effect Of A New Quaternary Amine, Banthine, Upon The Human Colon

Kern, F., Jr., et al., Gastroenterol. 17:198, 1951

This preliminary study indicates that Banthine is a useful adjunct in treatment of some patients with diarrhea and intestinal pain. The agent is apparently without value in management of constipation.

Clinical Clippings, May, 1951.

Cystic Malignant . . .

(Continued from Page 250)

ation does not increase the chances of survival in cases of extraocular extension. Apparently, too, radiation appears not to alter the course of the disease.

BIBLIOGRAPHY

Cystic Malignant Melanomas of the Uveal Tract — Dr. Robert Kennedy, Amer. Journal of Ophthalmology — Feb. 2, 1948.

Primary Sarcoma of the Iris — (Malignant Melanoma) — Dr. Hanford McKee, American Journal of Ophthalmology — August, 1942.

Melanosarcoma of the Ciliary Body and Iris — Dr. S. A. Agatson, Dr. S. Gartner, American Journal of Ophthalmology — November, 1949.

Melanosarcoma of the Iris — Dr. William Brown Doherty, American Journal of Ophthalmology — March, 1939.

Some Aids in Ophthalmology — Dr. Milton Ross — Archives — December, 1951.

Burke's Prescription Center

MEDICAL ARTS SQUARE

24-hour Prescription
and Delivery Service

5 Registered Pharmacists

Phone 3-3594

Albuquerque, New Mexico

Rapidly replacing the conventional practice of handwriting the facts of your practice is the Audograph Electric Soundwriter, small rugged, yet manufactured with the precision of a fine medical instrument — that records instantly everything you require for your records: Initial reports, diagnosis, progress reports, clinical and laboratory observations and post-operative instructions. All you do, Doctor, is speak. It will even serve you in your car when you are out on patient calls.

D. L. PILLOW CO.
1021 E. Missouri St., El Paso, Texas
Phone 2-9332

THE BAKER CO.
527 N. Mesilla Ave.
Albuquerque 5-1962

Other branches in
LUBBOCK MIDLAND AMARILLO

ELASTIC STOCKINGS USED TO CUT BLOOD CLOT DEATHS

BOSTON, Feb. 26 (UP) — A Boston doctor reports that the use of elastic stockings on bedridden patients may be the means of cutting down the deaths caused by blood clots.

Dr. Chester S. Keefer, physician-in-chief of Massachusetts Memorial hospitals, reported at the annual meeting yesterday that since last July every patient admitted for medical or surgical services has been fitted with elastic stockings.

And of 5000 persons so treated, he said, there has been only one death from embolism.

Dr. Keefer said that most clots that block the heart originate in the legs. Age and disease often makes a pocket or "pouch" in the veins where the blood flows sluggishly, increasing the chances of the blood thickening, he said.

The use of a stocking that encases the leg from the toe to just above the knee, he said, constricts the veins and prevents the blood from slowing too much and clotting.

For Above Purpose Use

POST-OPERATIVE SURGICAL STOCKINGS

Send For Price Lists

Park Bishop
SURGICAL SUPPLIES

413 N. Mesa Ave. El Paso, Texas

Margie's Corset & Maternity Shop is a Department of Park Bishop Co.